

Refine Search

Search Results -

Terms	Documents
L1.clm.	12

Database: US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L2

Search History

DATE: Thursday, August 31, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u>
side by side			result set
DB=PGPB; PLUR=YES; OP=OR			
<u>L2</u>	L1.clm.	12	<u>L2</u>
<u>L1</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	43	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	66

Database: US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L1

Search History

DATE: Thursday, August 31, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

Set
Name Query
side by
side

Hit Set
Count Name
result set

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR
L1 ((operating adj1 system adj1 domain\$1) or OSD) same port same
switch\$3

66 L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	9

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Database: US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search: L2

Search History

DATE: Thursday, August 31, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

<u>Set</u>	<u>Name</u>	<u>Query</u>	<u>Hit</u>	<u>Set</u>
			<u>Count</u>	<u>Name</u>
side by side				result set
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR				
<u>L2</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3		9	<u>L2</u>
DB=PGPB,USPT,USOC; PLUR=YES; OP=OR				
<u>L1</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3		66	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
(709/216 709/220 709/230 709/250 709/226 370/351 370/357 370/362 370/386 370/399 710/305 710/313 710/316 710/317 710/105 710/33 710/36 714/4).ccls.	17110

Database: US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search: L4

Search History

DATE: Thursday, August 31, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

Set

Name Query

side by
side

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L4 710/305,313,316,317,105,33,36;709/216,220,230,250,226;370/351,357,362,386,399;714/4.ccls.

L3 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

DB=PGPB; PLUR=YES; OP=OR

L2 L1.clm.

L1 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L1 and L4	7

Database: US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L5

Search History

DATE: Thursday, August 31, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

[Set](#)

[Name Query](#)

side by
side

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L5 l1 and L4

L4 710/305,313,316,317,105,33,36;709/216,220,230,250,226;370/351,357,362,386,399;714/4.ccls.

L3 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

DB=PGPB; PLUR=YES; OP=OR

L2 L1.clm.

L1 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

END OF SEARCH HISTORY


[Home](#) | [Login](#) | [Logout](#) | [Access Information](#) | [Alerts](#) |

Welcome United States Patent and Trademark Office

Search Results

BROWSE

SEARCH

IEEE Xplore GUIDE

Results for "((operating system)<in>metadata) <and> (port<in>metadata))<and> (swi..."
 Your search matched 10 of 1397873 documents.

[e-mail](#)

A maximum of 100 results are displayed, 25 to a page, sorted by **Relevance** in **Descending** order.

» Search Options

[View Session History](#)
[New Search](#)

Modify Search

(((operating system)<in>metadata) <and> (port<in>metadata))<and> (switch*<in>

Check to search only within this results set

Display Format: Citation Citation & Abstract

[Select All](#) [Deselect All](#)

» Key

IEEE JNL IEEE Journal or Magazine

IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

1. **SunOS on SPARC**
 Kleiman, S.R.; Williams, D.;
[Compcon Spring '88. Thirty-Third IEEE Computer Society International Conference on Computers and Communications](#)
 Papers
 29 Feb.-3 March 1988 Page(s):289 - 293
 Digital Object Identifier 10.1109/CMPCON.1988.4876
[AbstractPlus](#) | Full Text: [PDF\(368 KB\)](#) IEEE CNF
[Rights and Permissions](#)

2. **Cost-Benefit Analysis for Local Integrated Facsimile/Data/Voice Packet Communications Networks**
 Niznik, C.;
[Communications, IEEE Transactions on \[legacy, pre - 1988\]](#)
 Volume 30, Issue 1, Part 1, Jan 1982 Page(s):19 - 27
[AbstractPlus](#) | Full Text: [PDF\(920 KB\)](#) IEEE JNL
[Rights and Permissions](#)

3. **KNITS: switch-based connection hand-off**
 Papathanasiou, A.E.; Van Hensbergen, E.;
[INFOCOM 2002. Twenty-First Annual Joint Conference of the IEEE Computer Communications Societies. Proceedings. IEEE](#)
 Volume 1, 23-27 June 2002 Page(s):332 - 341 vol.1
 Digital Object Identifier 10.1109/INFCOM.2002.1019275
[AbstractPlus](#) | Full Text: [PDF\(245 KB\)](#) IEEE CNF
[Rights and Permissions](#)

4. **EtheReal: a host-transparent real-time Fast Ethernet switch**
 Varadarajan, S.; Chiueh, T.;
[Network Protocols. 1998. Proceedings. Sixth International Conference on](#)
 13-16 Oct. 1998 Page(s):12 - 21
 Digital Object Identifier 10.1109/ICNP.1998.723721
[AbstractPlus](#) | Full Text: [PDF\(108 KB\)](#) IEEE CNF
[Rights and Permissions](#)

5. **A comparative study of some network subsystem organizations**
 Ponomarev, D.V.; Ghose, K.;
[High Performance Computing. 1998. HIPC '98. 5th International Conference on](#)
 17-20 Dec. 1998 Page(s):436 - 443

Digital Object Identifier 10.1109/HIPC.1998.738019

[AbstractPlus](#) | Full Text: [PDF\(84 KB\)](#) IEEE CNF
[Rights and Permissions](#)

- 6. ATM based video and audio codecs**
Nicolaou, C.;
[ATM in Professional and Consumer Applications \(Digest No: 1997/113\), IEE C](#)
23 May 1997 Page(s):3/1 - 3/6
[AbstractPlus](#) | Full Text: [PDF\(340 KB\)](#) IEE CNF
- 7. Performance evaluation of ring-structure register file in multimedia applic**
Tay-Jyi Lin; Chi-Chi Chang; Tsung-Hsun Yang; Yu-Ming Chang; Chien-Hung L
Lee; Hung-Yueh Lin; Chein-Wei Jen;
[Multimedia and Expo, 2003. ICME '03. Proceedings. 2003 International Confer](#)
Volume 1, 6-9 July 2003 Page(s):I - 121-4 vol.1
Digital Object Identifier 10.1109/ICME.2003.1220869
[AbstractPlus](#) | Full Text: [PDF\(391 KB\)](#) IEEE CNF
[Rights and Permissions](#)
- 8. Development of real-time simulator using traffic monitoring**
Saito, H.; Ohara, H.; Satoh, D.;
[Communications, 2000. ICC 2000. 2000 IEEE International Conference on](#)
Volume 1, 18-22 June 2000 Page(s):195 - 199 vol.1
Digital Object Identifier 10.1109/ICC.2000.853091
[AbstractPlus](#) | Full Text: [PDF\(376 KB\)](#) IEEE CNF
[Rights and Permissions](#)
- 9. A World-Wide Web server on a multicomputer system**
Chun-Hsing Wu; Chun-Chao Yeh; Jie-Yong Juang;
[Parallel Architectures, Algorithms, and Networks, 1996. Proceedings. Second I](#)
[Symposium on](#)
12-14 June 1996 Page(s):522 - 528
Digital Object Identifier 10.1109/ISPAN.1996.509035
[AbstractPlus](#) | Full Text: [PDF\(700 KB\)](#) IEEE CNF
[Rights and Permissions](#)
- 10. A generic software platform for local ATM networking**
Lalgudi, H.; Xiaoqiang Chen; Kumar, V.;
[Global Telecommunications Conference, 1995. GLOBECOM '95., IEEE](#)
Volume 3, 13-17 Nov. 1995 Page(s):1967 - 1971 vol.3
Digital Object Identifier 10.1109/GLOCOM.1995.502750
[AbstractPlus](#) | Full Text: [PDF\(532 KB\)](#) IEEE CNF
[Rights and Permissions](#)

[Home](#) | [Login](#) | [Logout](#) | [Access Information](#) | [AIE](#)

Welcome United States Patent and Trademark Office

 AbstractPlus[View Search Results](#) | [Previous Article](#) | [Next Article](#)[BROWSE](#)[SEARCH](#)[IEEE Xplore GUIDE](#) e-[Access this document](#)Full Text: [PDF](#) (108 KB)[Download this citation](#)Choose [Citation & Abstract](#)[Download](#) [ASCII Text](#)[» Learn More](#)[Rights and Permissions](#)[» Learn More](#)

EtheReal: a host-transparent real-time Fast Ethernet switch

Varadarajan, S. Chiueh, T.

Dept. of Comput. Sci., State Univ. of New York, Stony Brook, NY, USA;

This paper appears in: [Network Protocols, 1998. Proceedings. Sixth International Conference on](#)

Publication Date: 13-16 Oct. 1998

On page(s): 12 - 21

Number of Pages: xii+349

Meeting Date: 10/13/1998 - 10/16/1998

Location: Austin, TX

INSPEC Accession Number:6251244

Digital Object Identifier: 10.1109/ICNP.1998.723721

Posted online: 2002-08-06 21:51:45.0

Abstract

Distributed multimedia applications require guaranteed quality of service (QoS) from the network. This paper describes the design, implementation, and evaluation of a real-time Fast Ethernet switch that provides bandwidth guarantees to real-time applications running on Ethernet. The switch performs modifications to the hardware and operating system on the host machines. At the heart of the architecture is a novel real-time connection setup protocol that is completely transparent to the host OS, and thus allows the switch to be deployed in a network of heterogeneous machines running different platforms. The only dependency of EtheReal on the hosts is their support for TCP/UDP/IP. The EtheReal switch uses an Ethernet address swapping technique for real-time packets, similar to the complexity of maintaining a global connection ID space. Because of the inherent CRC computation in Ethernet hardware, this technique significantly reduces the total processing overhead compared to the software-based connection swapping at higher network layers. The current EtheReal switch prototype is fully operational on off-the-shelf PC hardware. It is capable of supporting up to 640 Mbit/s across 4 ports. The connection establishment overhead of 0.1-0.6 msec and a 10 μ s non-real-time packet latency are the main performance bottlenecks.

Index Terms

Inspec

Controlled Indexing

[electronic switching systems](#) [local area networks](#) [microcomputer applications](#) [communication](#) [network operating systems](#) [packet switching](#) [quality of service](#) [systems](#) [telecommunication computing](#) [transport protocols](#)

Non-controlled Indexing

0.1 to 0.6 ms 10 μ s 640 Mbit/s CRC support EtheReal switch architecture platforms QoS TCP/UDP/IP address swapping technique bandwidth guarantees distributed multimedia applications global connection ID space guaranteed quality of service heterogeneous machines higher network layers host-transparent switch time packet latency off-the-shelf PC hardware operating system per-hop connection establishment overhead real-time Fast Ethernet switch real-time applications connection setup protocol real-time packets total processing overhead reduction

Author Keywords

Not Available

References

No references available on IEEE Xplore.

Citing Documents

- 1 Time-utility function-driven switched Ethernet: packet scheduling algorithm, implementation analysis, Wang, J.; Binoy Ravindran
Parallel and Distributed Systems, IEEE Transactions on
On page(s): 119- 133, Volume: 15, Issue: 2, Feb 2004
[Abstract](#) | Full Text: [PDF](#) (1677)
- 2 Ethernet-based real-time and industrial communications, Decotignie, J.-D.
Proceedings of the IEEE
On page(s): 1102- 1117, Volume: 93, Issue: 6, June 2005
[Abstract](#) | Full Text: [PDF](#) (368)
- 3 FTT-Ethernet: a flexible real-time communication protocol that supports dynamic QoS in Ethernet-based systems, Pedreiras, P.; Gai, P.; Almeida, L.; Buttazzo, G.C.
Industrial Informatics, IEEE Transactions on
On page(s): 162- 172, Volume: 1, Issue: 3, Aug. 2005
[Abstract](#) | Full Text: [PDF](#) (576)

[◀ View Search Results](#) | [◀ Previous Article](#) | [Next Article ▶](#)

[Help](#) [Contact Us](#) [Privacy](#)

© Copyright 2006 IEEE

Indexed by
 Inspec®